

ABSTRACT

A pneumatic mallet-blow operated fastener driving tool for securing hardwood planks to a subfloor, which comprises a fastener discharge mechanism in turn comprising a housing having a pressurized main chamber in direct link with a compressed air intake, a selectively depressurizable closure chamber pressurized when the tool is at rest, and a cylinder in which a piston having a plunger affixed thereto is slidably mounted. A valve, biased toward a closed position when the closure chamber is pressurized, or biased towards its open limit position if the closure chamber is depressurized, permits selective establishment of fluid communication between the inside of the cylinder and the pressurized main chamber. The piston, at a retracted limit position when the tool is at rest, is forced towards a deployed limit position when fluid communication is established between the main chamber and the inside of the cylinder, in order for its plunger to strike a fastener and drive it into an underlying plank. In use, after the mallet blow has engendered depressurizing of the closure chamber, the valve is moved in its open limit position, a fastener is discharged from the tool upon being struck by deployment of the piston by being struck by its plunger, and closure chamber starts to become pressurized again by compressed fluid flowing therein from the main chamber through a first fluid inlet, which initiates movement of the valve towards its closed position, and after such movement is initiated, a second fluid inlet port opens up to further admit compressed air into the closure chamber and thus accelerate pressurizing of the closure chamber and displacement of the valve towards its closed position.